

REMARKS

I. Status of the Claims

After entering the above amendments, claims 1, and 20-37 are pending in this application. Claims 1, 20, 21, 24, 25, 26, 27, 29, 33, 34 and 35 are amended herein. Claims 29, 33 and 34 have been amended to correct minor typographical errors. Claims 1, 20 and 21 have been amended to conform with proper English usage. Claim 1 has also been amended in order to more clearly identify that which Applicant claims. Exemplary support for this amendment can be found in the specification as filed, for instance, at page 20 lines 1-10. Claims 24, 25, 26, 27, and 35 have been amended in order to more clearly identify that which Applicant claims. Exemplary support for these amendments can be found in the specification and claims as filed, for instance, in previously presented claims 24, 25, 26, 27, and 35, and at page 3, line 25 - page 4, line 33 of the as-filed specification. Claims 24 and 25 have also been amended to further include C₆-C₂₄ alkyl ether carboxylates in the Markush group. Support for this amendment can be found in the as filed specification at page 4, lines 25-32.

II. Examiner Interview

Applicant thanks the Examiner and her supervisor for the courtesies extended to Applicants' representative, Deborah Herzfeld, on November 19, 2009. Applicant awaits the Examiner's Interview Summary regarding the substance of the interview.

III. Objection to the disclosure

The disclosure is objected to for allegedly containing no section headings. See Office Action at page 3. Applicant respectfully disagrees.

Under 37 CFR 1.77(b), the specification should, not must, include certain sections in order; and section headings should, not must, precede those sections. As such, what is provided in 37 CFR 1.77(b) serves only as a guideline and/or preference for the arrangement of the specification, and cannot be relied upon as an objection basis. Furthermore, it is Applicant's position that all applicable sections are included in the specification, and that a skilled artisan is capable of identifying their whereabouts.

Nonetheless, in order to advance prosecution, Applicant has amended the specification to include the following section headings: "BACKGROUND OF THE INVENTION," "SUMMARY," "DESCRIPTION OF THE DRAWINGS," AND "DETAILED DESCRIPTION OF THE INVENTION." Applicant therefore respectfully requests withdrawal of this objection.

IV. Objections to the claims

The Office objects to claim 1 because it is not in proper English. See Office Action at page 4. Applicant has corrected the grammatical structure of this claim in the current amendment, and respectfully requests this objection be withdrawn.

The Office objects to claims 24, 25, 29 and 34 because of inappropriate use of punctuation. *Id.* at page 5. Because the current amendment corrects the use of punctuation in those claims, Applicant respectfully requests these objections be withdrawn.

The Office objects to claim 33 because it contains a typographical error. *Id.* The present amendment corrects that typographical error, and Applicant respectfully requests this objection be withdrawn.

The Office objects to claim 35 because it is unclear based on Applicant's use of the word "and" rather than the word "or." *Id.* at page 4. The current amendment replaces the word "and" with the word "or." Therefore, Applicant respectfully requests this objection be withdrawn.

The Office also objects to claim 22 because it is allegedly unclear based on Applicant's use of the word "and" rather than the word "or." *Id.* Applicant respectfully disagrees. Claim 22 recites ". . . said at least one anionic surfactant is optionally combined with at least one surfactant chose from amphoteric and nonionic surfactants." The phrase "at least one optional surfactant" indicates that there can be more than one optional surfactant. Applicant intentionally chose the word "and" to indicate that, in the case of two optional surfactants, both amphoteric and nonionic surfactants can be chosen. Use of the word "or," as suggested by the Examiner here, would render a different and more narrow meaning than use of the word "and," because it would limit the "at least one optional surfactant" to be chosen either from amphoteric or nonionic surfactants. This is not what Applicant wishes to claim. Thus, because use of the word "and" is not unclear, Applicant respectfully requests this objection be withdrawn.

Finally, the Office objects to claims 24-30, 33 and 36 because use of the language "chosen from the group x, y, z . . ." is allegedly unclear. *Id.* at pages 4-5. Applicant respectfully disagrees. According to the M.P.E.P., "Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being 'selected from the group consisting of A, B, and C.'" M.P.E.P. 2173.05(h). Thus, the M.P.E.P. does not

require specific language, and the Office's suggestion is not a mandatory requirement but instead represents an example of acceptable alternative language. The present claims, as amended, are sufficiently clear and do not present "uncertainty or ambiguity." Therefore, Applicant respectfully requests the withdrawal of this objection.

V. Rejection of claims 1, 20-22, 24-27, 29-32, 34, 35, and 37 under § 102

The Office rejects claims 1, 20-22, 24-27, 29-32, 34, 35 and 37 under 35 U.S.C. § 102 as allegedly "being anticipated by" U.S. Patent No. 4,940,576 to Walsh ("Walsh") as evidenced by the merquat 100 product information guide and U.S. Patent No. 5,744,062 to Dahms ("Dahms"). Office Action at 6.

Specifically, the Office alleges that Walsh's Example 4 discloses a composition that anticipates the composition recited in claim 1. See *id.* Regarding the element of claim 1 requiring "at least one surfactant, wherein the amount of said surfactant ranges from 4% to 50% by weight, relative to the total weight of the composition," the Office alleges that Example 4 of Walsh comprises two surfactants, sodium lauryl ether sulphate and butyl digol, in a combined amount of 4.6%. See *id.*

Regarding the element of claim 1 reciting that the "composition is a water-in-water emulsion" the Office concedes that Walsh "does not specifically disclose that the composition [of Example 4] is a water-in-water emulsion." *Id.* at page 7. Instead, the Office alleges that "there are several features in [Walsh] which suggest that the composition [of Example 4] is a water-in-water emulsion." *Id.* Applicant respectfully disagrees with the Office's position, and traverses this rejection for at least the following reasons.

A. Butyl digol is not a surfactant

Applicant disagrees with the Office regarding the amount of surfactant contained in Example 4 of Walsh. The Office alleges that butyl digol is a surfactant, but provides no evidence to support that assertion. Butyl digol is also described in Walsh as "monobutyl ether of diethylene glycol." See *Walsh* at Column 4, line 63. The *International Cosmetic Ingredient Dictionary and Handbook* ("the Handbook") lists monobutyl diethylene glycol ether as an alternative name for butoxydiglycol, and shows a chemical formula for butoxydiglycol which also represents the monobutyl ether of diethylene glycol. INTERNATIONAL COSMETIC INGREDIENT DICTIONARY AND HANDBOOK, p. 220 (10th ed. 2004), attached herewith as Exhibit A. Thus, butoxydiglycol is an alternative name for butyl digol. The Handbook lists butoxydiglycol as a member of the families alcohols and ethers. *Id.* The following functional uses for butoxydiglycol are listed in the Handbook: fragrance ingredient; solvent; and viscosity decreasing agent. *Id.* No mention is made of the use of butoxydiglycol as a surfactant in the Handbook, however. See *id.*

Walsh itself similarly defines butyl digol as an organic co-solvent used to ensure that the compositions of the invention are clear single-phase solutions. See *Walsh* at Column 4, lines 50-64. Although Walsh lists a number of surfactants, butyl digol is not mentioned among them. See *id.* at Column 3, lines 29-53. Thus, according to Walsh, butyl digol is a solvent rather than a surfactant. Butyl digol is not defined as a surfactant in any of the other references cited in the Office Action. The evidence of record, therefore, shows that butyl digol is not a surfactant.

Having shown that butyl digol is not a surfactant, Applicant reasserts that Example 4 only contains one surfactant, sodium lauryl sulfate, in an amount of 2.3%, which is outside the scope of the present claims. Thus, Walsh does not meet the limitation of claim 1 requiring "at least one surfactant, wherein the amount of said surfactant ranges from 4% to 50% by weight, relative to the total weight of the composition."

B. Walsh does not clearly and unequivocally disclose that Example 4 is a water-in-water emulsion

Applicant respectfully disagrees with the Office's position that Walsh anticipates the claims because certain features of the prior art "suggest" that Example 4 of Walsh is a water-in-water emulsion. In order for a reference to anticipate a claim it must "clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference." *In re Ankley*, 455 F.2d 586, 587, 172 U.S.P.Q. 524, 526 (C.C.P.A. 1972).

Here Walsh explicitly states that a "single-phase hair rinse conditioner" was made in Example 4. Walsh at Column 7, lines 56-59. Walsh also explains that clarifying agents, such as the sodium chloride of Example 4, are included in compositions of Walsh's invention in order "to maintain the composition in the form of a clear single phase solution prior to dilution." *Id.* at Column 4, lines 25-40. Compositions may further contain an organic co-solvent, such as the butyl digol of Example 4, in order to "produce a clear single-phase product." *Id.* at Column 4, lines 44 - 64. Thus, Walsh explicitly teaches that Example 4 is a single-phase solution.

Moreover, the portions of the prior art to which the Examiner points, when read in full context, further support the explicit statement made in Walsh that Example 4 is a single-phase solution, rather than suggest that Example 4 is a water-in-water emulsion. First, the Office alleges that because Walsh discloses liquid crystals, and because such liquid crystals may be classified as water-in-water emulsions, Walsh suggests that Example 4 is a water-in-water emulsion composition. The disclosures regarding liquid crystal formation, however, are directed only to substantially diluted compositions of the invention and therefore do not suggest that Example 4 is a water-in-water emulsion, as discussed below.

Regarding the compositions of Walsh's disclosure, such as Example 4, Walsh states that they are "aqueous clear single-phase liquid hair rinse conditioner composition[s]." According to the direct teaching of Walsh, the liquid crystals are only formed when the complex formed between the cationic polymer and anionic surfactant "separates out upon dilution of the composition." Walsh at Column 1, lines 33 - 48 (emphasis added). Later in the specification, the liquid crystals are discussed again in relation to a method of using the hair rinse conditioner compositions of Walsh's invention. See *id.* at Column 5, line 45 - column 6, line 2. There, Walsh states that the liquid crystal phase is formed only when "the rinse conditioner is substantially diluted." *Id.* at Column 5, lines 48-51 (emphasis added). Thus, Walsh teaches that compositions of its invention, such as Example 4, are not water-in-water emulsions unless they have been substantially diluted.

Indeed, a complete reading of Walsh shows that significant efforts are made to ensure that compositions such as Example 4 are single phase. As stated above,

Walsh explains that clarifying agents and co-solvents may be included in the compositions in order to maintain a clear single phase solution prior to dilution. Thus, rather than suggest that the composition of Example 4 is a water-in-water emulsion, the specification of Walsh when taken as a whole further supports the explicit teaching that Example 4 is a single phase solution.

The Office also alleges that the instant specification suggests that the composition of Walsh's Example 4 is a water-in-water emulsion because the instant specification states that "droplets enriched in cationic polymer can be obtained in a surfactant medium by mixing together certain amounts of cationic polymer and of water-soluble salt in a surfactant medium" Specification as-filed at page 1, line 38 - page 2, line 2. This statement, however, does not suggest that mixing together cationic polymer and water-soluble salt in a surfactant medium necessarily produces a water-in-water emulsion, as required to establish anticipation. M.P.E.P. § 2112 (citing *In re Rijckaert*, 9 F.3d 1531, 1534, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993)).

Finally, in reply to Applicant's previous response to the rejection under § 103, the Office alleges that the composition of Example 4, when applied to wet hair, meets every limitation of the present invention. However, according to the full teachings of Walsh liquid crystals will form when the composition of Example 4 is applied to wet hair only if that application is also accompanied by substantial dilution of the composition. Thus, to the extent the Office relies on the wet comb test under its § 102 rejection, Applicant disagrees.

The wet comb test which the Office points to is described by Walsh as follows. First, an 8 gram hair switch was washed several times with a surfactant. After the final

wash, excess water was removed and the hair was combed until free of tangles. "The hair switch was then treated with 0.5ml of the [Example 4 composition] which was massaged into the hair for 30 seconds. After leaving for 60 seconds the hair switch was rinsed with water. After removing excess water, the switch was again combed until free of tangles." Walsh at Column 6, lines 59 - 64 (emphasis added).

Importantly, nowhere in Walsh was it determined whether any liquid crystals formed on the hair during this test. For this, the Office simply relies on the general teachings of Walsh. However, as discussed above, the general teaching of Walsh is that the compositions of that invention form liquid crystals only when "the rinse conditioner is substantially diluted." *Id.* at Column 5, lines 48-51 (emphasis added). Substantial dilution may have occurred in the wet comb test after the hair switch having the composition of Example 4 applied to it was rinsed with water. Although excess water was removed from the hair after this rinsing step, this removal of excess water would not have changed the fact that the rinse step led to substantial dilution of the composition if liquid crystals were formed.

Applicant does not argue with the Office that this rinsing with water might have resulted in the formation of liquid crystals. However, according to the complete teachings of Walsh, if those liquid crystals formed it was only because the rinsing also resulted in substantial dilution of the composition. Because liquid crystal formation requires substantial dilution, if the wet comb test of Example 4 did result in a water-in-water emulsion then the Office would have no means of establishing what weight percent of surfactant, salt or cationic polymer is present in the composition after Example 4 had been applied to the hair and rinsed with enough water to form liquid

crystals. The Office, therefore, cannot point to the results of the wet comb test of Example 4 as showing a composition that meets each and every limitation of the claims.

Because the evidence of record shows that butyl digol is a solvent rather than a surfactant, and because Example 4 is taught to be a single phase solution unless substantially diluted, Walsh fails to disclose a composition meeting every element of claim 1. Applicant, therefore, requests the withdrawal of the rejection of claim 1 under § 102. Similarly, because claims 20-22, 24-27, 29-32, 34, 35, and 37 depend from claim 1, Applicant requests those rejections be withdrawn as well.

VI. Rejection of Claims 1-37 under § 103

The Office rejects claims 1-27, 29-32 and 34-37 under 35 U.S.C. § 103(a) as allegedly “being unpatentable over” Walsh as evidenced by the Merquat 100 product information guide and Dahms (Office Action at 12); rejects claim 28 under 35 U.S.C. § 103(a) as allegedly “being unpatentable over” Walsh as evidenced by the Merquat 100 product information guide and Dahms and further in view of US Patent No. 5,720,964 to Murray (“Murray”) (Office Action at 14-15), and rejects claim 33 under 35 U.S.C. § 103(a) as allegedly “being unpatentable over” Walsh as evidenced by the Merquat 100 product information guide and Dahms and further in view of US Patent No. 5,589,177 to Herb (“Herb”) and US Patent No. 6,323,165 to Heiler (“Heiler”) (Office Action at 15-16).

The Office alleges, using the same rationale used under the § 102 rejection, that Walsh as evidenced by the Merquat 100 product information guide and Dahms discloses each and every element of claims 1, 20-22, 24-27, 29-32, 34, 35 and 37. See Office Action at page 13. Regarding claims 23 and 36, the Office alleges that it would

have been obvious to modify Example 4 by incorporating optional agents recited in Walsh in order to meet the limitations of those claims. See *id.* at pages 13-14. Regarding claim 28, the Office alleges that Murray provides motivation to modify Example 4 of Walsh to include C₈-C₂₀ alkyl betaines as an amphoteric surfactant . See *id.* at page 15. Finally, regarding claim 33, the Office alleges Herb and Heiler provide motivation to modify Example 4 of Walsh to include as a cationic polymer a cellulose ether derivative comprising quaternary ammonium groups. See *id.* at page 16

The Office's rejection under § 103 is premised on its position that each and every element of claims 1, 20-22, 24-27, 29-32, 34 and 35 are disclosed by Walsh. Applicant respectfully disagrees with this position for the same reasons discussed above. First, Applicant reiterates that Walsh does not disclose a composition comprising at least one surfactant in an amount ranging from 4% to 50% by weight, relative to the total weight of the composition, because the evidence of record shows that butyl digol is a solvent, not a surfactant. Second, Applicant reiterates that neither the composition of Example 4, nor the use of Example 4 in the wet comb test, discloses a composition comprising "at least one surfactant, wherein the amount of said surfactant ranges from 4% to 50% by weight, relative to the total weight of the composition," that is "characterized in that said composition is a water-in-water emulsion."

Moreover, Walsh does not disclose any reasons or methods for modifying Example 4 in order to arrive at such a composition. For example, although one might modify the composition of Example 4 with the teachings in Walsh in order to arrive at a composition containing liquid crystals, that modification would result in a substantially diluted form of Example 4, containing the surfactant, salt and cationic polymer in

different amounts than disclosed in Example 4. Thus, the Office can attempt to either point to Example 4 as disclosing a composition comprising certain components in certain amounts, or it can attempt to point to the diluted Example 4 as disclosing a water-in-water emulsion composition. However, the Office cannot point to the single-phase composition in Example 4 as disclosing elements of the claims relating to the amount of each component in the composition while simultaneously pointing to other aspects of Walsh related to diluted forms of compositions of the invention to find the element requiring a water-in-water emulsion in order to establish a prima facie case of obviousness. See *Ex parte Burgaud*, Appeal 2009-1991 at page 5 (B.P.A.I. May 1, 2009) (holding that a prima facie case of obviousness was not established where “[i]t appeared the Examiner ha[d] indiscriminately selected portions of [a prior art reference] . . . to identify the components utilized in the claimed invention.”)

Applicant also notes that none of the other prior art references cited by the Office provide a reason or motivation to modify Walsh in order to arrive at claim 1. First, none of those references define butyl digol in any way. Therefore, none of those references help to establish that Example 4 of Walsh discloses a composition comprising at least one surfactant wherein the amount of an at least one surfactant ranges from 4% to 50% by weight, relative to the total weight of the composition.

Additionally, none of those references provide any teaching that could be used to modify the single-phase composition of Walsh's Example 4 in order to arrive at a water-in-water emulsion composition according to claim 1. For example, Heiler is directed at solutions of cationic polymers useful for inhibiting protein deposits on contact lenses. The reference does not refer to emulsions, much less water-in-water emulsions.

Similarly, Herb is directed at water-in-oil-in-water emulsions and, thus, offers no assistance in modifying Walsh to arrive at a water-in-water emulsion composition according to claim 1.

Finally, Murray discloses that some compositions according to its invention are single phase, while others result in a “complex coacervate phase” that might be viewed as a water-in-water emulsion. Murray at Column 3, line 56 - Column 4, line 4. Murray states that “[c]oacervate formation is dependent upon a variety of criteria such as molecular weight, concentration, and ratio of interacting ionic materials, ionic strength (including modification of ionic strength, for example, by addition of salts), charge density of the cationic and anionic species, pH, and temperature.” *Id.* Thus, Murray discloses that controlling the formation of the coacervate phase is complex. However, it provides no guidance regarding how one might go about controlling the formation of the coacervate phase. Regardless of whether certain compositions of Murray are water-in-water emulsions, that reference provides no assistance in modifying Walsh in order to arrive at a water-in-water emulsion comprising, among other things, at least one surfactant in an amount ranging from 4% to 50% by weight, relative to the total weight of the composition.

Because neither Walsh alone nor in combination with the other cited art would lead one of skill in the art to a single composition meeting every element of claim 1, and because claims 20-37 depend from claim 1, Applicant respectfully requests this rejection be withdrawn and the claims be allowed.

VII. Conclusion

In view of the foregoing amendments and remarks, Applicant, respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1 and 20-37 in condition for allowance. Applicant submits that the proposed amendments to claims 1, 20, 21, 24, 25, 26, 27, 29, 33, 34 and 35 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Finally, Applicant submits that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

If the Examiner believes a telephone conference could be useful in resolving any of the outstanding issues, she is respectfully urged to contact Applicant's undersigned counsel at 202-408-4368.

U.S. Application No. 10/585,209
Attorney Docket No. 06028.0131-00000

Please grant any extensions of time required to enter this response and charge
any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
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Dated: November 23, 2009

By: Jennifer Gupta / Jennifer Gupta
for Deborah Herzfeld Reg. No. 54,257
Reg. No. 52,211

Attachment:

**Exhibit A - INTERNATIONAL COSMETIC INGREDIENT DICTIONARY
AND HANDBOOK, p. 220 (10th ed. 2004).**